

EJECTOR COOLED NOZZLE

ABSTRACT

A gas turbine engine exhaust nozzle includes a divergent section located aft of a convergent section and a throat therebetween. An exterior fairing is spaced radially outwardly of the divergent section. An ejector cooling air flowpath leads from an ejector cooling air inlet in an aft portion of the fairing to a cooling air ejector in the nozzle. An annular nozzle plenum may be disposed between the divergent section of the nozzle and the external fairing and be part of the ejector cooling air flowpath between the ejector cooling air inlet and the ejector. A plurality of divergent flaps and divergent seals in the divergent section may employ cooling air passages, such as slots, to serve as the ejector. The fairing may include a plurality of circumferentially adjacent exterior flaps and exterior seals and employ truncated ends of or apertures in the exterior seals as the ejector cooling air inlet.